

LISTING OF CLAIMS

1. (currently amended) A method for managing data communications between hosts ~~(9)~~ of a switched Ethernet network ~~(8)~~, the method comprising:

a switch of said network dynamically assigning hosts ~~(9)~~ to logical groups of hosts for a session in response to a session request such that the hosts ~~(9)~~ participating in a data communication are assigned to the same group;

said switch ~~(1)~~ of the network ~~(8)~~, associating each said group with a service class indicative of requirements for forwarding data across the switch ~~(1)~~ for data communications between hosts ~~(9)~~ in the group during said session, and forwarding received data across the switch ~~(1)~~ in a manner dependent on the service class of the group to which hosts ~~(9)~~ participating in the data communication are assigned;

in the switch, monitoring traffic congestion; and

in the switch ~~(1)~~, disabling data communications between hosts ~~(9)~~ in one or more of said groups when required based on said traffic congestion to satisfy the forwarding requirements for at least one said service class.

2. (currently amended) The ~~A~~ method as claimed in claim 1 wherein data communications are disabled for a said group by discarding data received from any host ~~(9)~~ in that group.

3. (canceled)

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4. (currently amended) ~~The~~ The method as claimed in ~~any preceding claim 1~~ wherein the step of assigning hosts ~~(9)~~ to a logical group comprises allocating a group identifier to hosts ~~(9)~~ in that group.
5. (currently amended) The ~~A~~ method as claimed in ~~any preceding claim 1~~ wherein each said logical group comprises a VLAN, and wherein the step of assigning hosts ~~(9)~~ to a logical group comprises allocating a VLAN identifier to hosts ~~(9)~~ in that group.
6. (currently amended) The ~~A~~ method as claimed in claim 4 ~~or claim 5~~ wherein a group is associated with a service claim by storing data packets transmitted between hosts ~~(9)~~ in that group.
7. (currently amended) The ~~A~~ method as claimed in ~~anyone of claims 4 to 6~~ claim 4 including inserting the identifier allocated to a said group in data packets transmitted between hosts ~~(9)~~ in that group.
8. (currently amended) The ~~A~~ method as claimed in claim 7 wherein, for at least one said group, the identifier is inserted in data packets by hosts ~~(9)~~ in that group.
9. (currently amended) The ~~A~~ method as claimed in claim 7 ~~or claim 8~~ wherein, for at least one said group, the identifier is inserted by the switch ~~(1)~~ in data packets received from a host ~~(9)~~ in that group.

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10. (currently amended) The ~~A~~ method as claimed in ~~any~~ preceding claim 1 wherein a high-priority service class and a low-priority service class are defined in the switch ~~(1)~~, whereby forwarding of received data from hosts ~~(9)~~ in groups associated with the high-priority service class takes precedence over forwarding of received data from hosts ~~(9)~~ in groups associated with the low-priority service class.
11. (currently amended) The ~~A~~ method as claimed in claim 10 including, for at least one said group associated with the high-priority service class, calculating a transmission schedule in the switch ~~(1)~~ indicating time periods for receiving data from hosts ~~(9)~~ in the group such that the data received during said time periods will be forwarded by the switch ~~(1)~~ in accordance with the high-priority service ~~20~~ class, the schedule being calculated in dependence on the bandwidth required for data communications between hosts ~~(9)~~ in the group.
12. (currently amended) The ~~A~~ method as claimed in claim 11 including disabling data communications outside the scheduled time periods for the or each said group associated with the high-priority service class ~~25~~ when required to satisfy the forwarding requirements of the high-priority service class.
13. (currently amended) The ~~A~~ method as claimed in claim 11 ~~or claim 12~~ including sending the transmission schedule calculated for a said group to the or each transmitting host ~~(9)~~ in the group.

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14. (currently amended) The ~~A~~ method as claimed in ~~any one of claims 10 to 13~~ claim 10 wherein the low-priority service class is defined in the switch ~~(1)~~ for best-effort forwarding of received data.

15. (currently amended) The ~~A~~ method as claimed in claim 14 including assigning all hosts ~~(9)~~ participating in best-effort data communications to one said group associated with the low-priority service class.

16. (currently amended) The ~~A~~ method as claimed in ~~anyone of claims 1 to 2 and 4 to 10~~ claim 1 wherein a plurality of different-priority service classes are defined in the switch ~~(1)~~, whereby forwarding of received data from hosts ~~(9)~~ in groups associated with each of said different-priority service classes takes precedence over forwarding of received data from hosts ~~(9)~~ in groups associated with any lower-priority service classes, the method including disabling data communications for groups associated with one or more low-priority service classes when required to satisfy the forwarding requirements of one or more higher-priority service classes.

17. (currently amended) A switch ~~(1)~~ for connection in a switched Ethernet network ~~(8)~~, the switch ~~(1)~~ comprising:

switching circuitry ~~(4)~~ for forwarding across the switch ~~(1)~~ of data received at a port ~~(2)~~ of the switch ~~(1)~~;

assignment means for dynamically assigning hosts in the network to logical groups of hosts for a session in response to a session request;

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memory ~~(6)~~ for storing data indicative of an assignment of hosts ~~(9)~~ in the network ~~(8)~~ to logical groups of hosts, said assignment being such that the hosts ~~(9)~~ participating in the data communication are assigned to the same group; and

control logic ~~(5)~~ for associating each said group with a service class indicative of requirements for forwarding data across the switch ~~(1)~~ for data communications between hosts ~~(9)~~ in the group during the session, and for controlling forwarding of received data by the switching circuitry ~~(4)~~ in a manner dependent on the service class of the group to which hosts ~~(9)~~ participating in the data communication are assigned;

wherein the control logic ~~(5)~~ is configured to disable data communications between hosts ~~(9)~~ in one or more of said groups when required to satisfy the forwarding requirements for at least one said service class.

18. (currently amended) A switched Ethernet network ~~(8)~~ comprising at least one switch ~~(1)~~ as claimed in claim 17, and a plurality of hosts ~~(9)~~ connected to ports ~~(2)~~ of said at least one switch ~~(1)~~.

19. (currently amended) A computer program element comprising computer program code means which, when loaded in a processor of a switch ~~(1)~~ for connection in a switched Ethernet network ~~(8)~~ configures the processor to:

dynamically assign hosts of the network to logical groups of hosts for a session in response to a session request;

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associate each said group with a service class indicative of requirements for forwarding data across the switch ~~(1)~~ for data communications between hosts ~~(9)~~ in the group during the session, and to control forwarding of received data across the switch ~~(1)~~ in a manner dependent on the service class of the group to which hosts ~~(9)~~ participating in the data communication are assigned; and

~~to~~ disable data communications between hosts ~~(9)~~ in one or more of said groups when required to satisfy the forwarding requirements for at least one said service class.

20 (currently amended) A computer program element comprising computer program code means which, when loaded in a processor of a switch ~~(1)~~ for connection in a switched Ethernet network ~~(8)~~, configures the processor to perform a method as claimed in claim 1 ~~anyone of claims 1 to 2 and 4 to 16.~~

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